

CLAIMS

What is claimed is:

1. A device for variable activation of valves for an internal combustion engine, which is arranged in a cylinder head (ZK) having a camshaft (1) mounted in a fixed location, having valves that close by means of a spring force, together with a stroke transfer arrangement (3) assigned to each one of the valves wherein this device is guided in a fixed location in the cylinder head, (ZK) the device comprising:

a) at least one movable element (4) for setting a valve stroke setting, wherein said movable element is disposed in the cylinder head (ZK) and pivotable around a pivot axis (A4) having a fixed position in the cylinder head, (ZK) wherein said movable element (4) has at least one support cam (41) and at least one control cam (42);

b) at least one intermediate member (5) supported on said movable element (4) which can change position, wherein said at least one intermediate member (5) can be mounted so as to be displaced;

c) at least one cam lever (11) coupled to the cam shaft (1)

wherein said at least one intermediate member (5) is in engagement with said cam lever (11);

d) at least one stroke transfer element (3) which can be engaged by said cam lever (11); and

e) at least one slide support (55, 550) coupled to said intermediate member (5);

wherein said at least one support cam (41) of said movable element (4) is set back radially, relative to said control cam (42) wherein said support cam (41) is in engagement with said at least one slide support (55, 550) of said intermediate member (5).

2. The device as in claim 1, wherein said at least one support cam (41) is arranged in a plane of an engagement region of said cam lever (11) and wherein the device further comprises a roller (53) coupled to said at least one intermediate member (5) and wherein said at least one slide support (55, 550) is used to cover said roller in a region directed towards said at least one support cam (41).

3. The device as in claim 1, wherein said at least one support cam (41) is arranged axially offset relative to said at

least one control cam (42).

4. The device as in claim 1, wherein said at least one slide support (55,550) of said at least one intermediate member (5) comprises at least two slide supports which are arranged on both sides of said at least one control cam (42) and a subsequent circumference region, wherein said at least two slide supports are in engagement with said radially set back support cam (41), and also in engagement axially with a subsequent circumference region of said at least one control cam (42).

5. The device as in claim 4, wherein said control cam (42), on said at least one movable element (4), is arranged to axially pivot in between two stroke transfer elements (3) for two valves (2), to be activated in parallel and wherein said at least one intermediate member (5) has an outside contour (52) with of said two stroke transfer arrangements (3) in each instance, wherein the device further comprises a pressure ridge (56) formed axially next to said at least one slide support (55) on said at least one intermediate member (5).

6. The device as in claim 5, further comprising a roller (410) mounted to rotate or pivot about an axle (40), wherein said at least one roller is coupled to said at least one movable element (4), forming said at least one support cam (41) that is

in engagement with said at least one slide support (55) of said at least one intermediate member (5).

7. The device as in claim 6, wherein said at least one stroke transfer element (3) is adapted so that it is supported on the cylinder head (ZK) in a region below the camshaft (1).

8. The device as in claim 7, further comprising at least one eccentric setting device (85) mounted to pivot in the cylinder head, wherein said at least one eccentric setting device (85) is in engagement with said at least one movable element (4) on a back of a region forming said at least one control cam (42).